# GW-WN150M 11b/g/n
# USB Wireless User Manual

Wireless Local Area Network USB Card

(For 802.11b/g/n Wireless Networks)

# Contents

1 Overview ..... 1
1.1 Product Introduction ..... 1
1.2 System Requirements ..... 1
1.3 Package List ..... 2
2 Driver and Utility Installation ..... 2
2.1 Installing the Driver and Utility ..... 2
3 Uninstalling the Driver and Utility ..... 9
4 Configuring the Utility ..... 9
4.1 Checking the Utility Status ..... 10
4.2 Signal Strength Indicated by the Utility Icon ..... 10
4.3 Opening the Utility ..... 10
4.4 General Page ..... 11
4.5 Profile Page ..... 12
4.5.1 Adding a Profile ..... 13
4.5.2 Removing a Profile ..... 14
4.5.3 Editing a Profile ..... 14
4.5.4 Duplicating a Profile ..... 14
4.5.5 Setting a Default Profile ..... 16
4.6 Available Network Page ..... 16
4.7 Status Page ..... 21
4.8 Statistics Page ..... 22
4.9 Wi-Fi Protected Setup Page ..... 24
4.9.1 PIN ..... 25
4.9.2 PBC ..... 30
Appendix A: Glossary ..... 32
Appendix B: Country Channel List ..... 34

# 1 Overview

## 1.1 Product Introduction

Thank you for choosing the GW-WN150 Realtek 11b/g/n USB adapter.

The adapter is designed for providing high-speed and unrivaled wireless performance for your computer. The faster wireless connection can bring you a better Internet experience, such as downloading, on-line game, and video streaming.

The GW-WN150 Realtek 11b/g/n USB adapter supports IEEE 802.11b/g/n 2.4GHz radio operation. With auto-sensing capability, the adapter packet transfer rate is up to 150 Mbps. In addition, the GW-WN150 Realtek 11b/g/n USB adapter has good anti-jamming capability. It supports WEP, TKIP, AES, WPA and WPA2 encryption, which prevents outside intrusion and protects your personal information from being exposed. Featuring high performance transmission rates, simple installation and adaptability, as well as strong security, the GW-WN150 Realtek 11b/g/n USB adapter is the perfect solution for small office and home needs.

## 1.2 System Requirements

System configuration recommended is as follows:

- Windows XP/2000/vista/win7
- Standard USB 2.0 port
- 128MB system memory or larger
- 300MHz processor or higher

## 1.3 Package List

The GW-WN150 Realtek 11b/g/n USB adapter product package contains the following items:

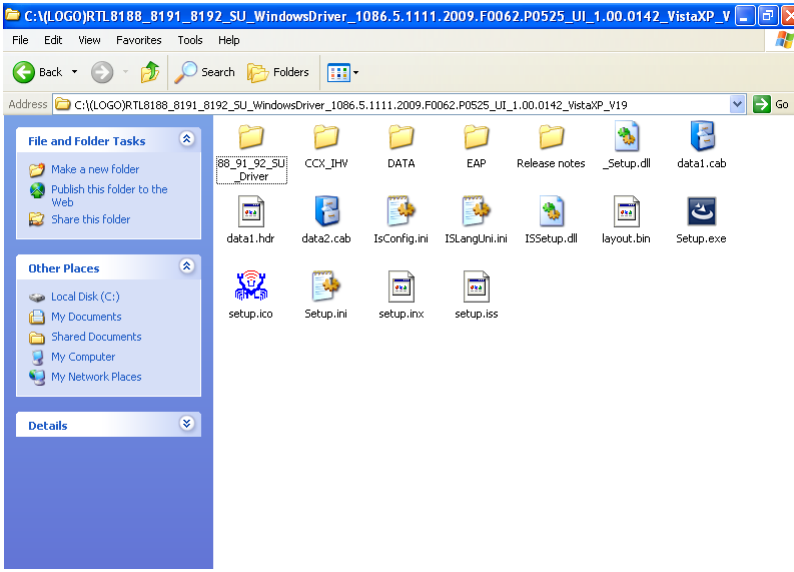
- 1x GW-WN150 Realtek 11b/g/n USB adapter
- 1 x CD (Driver & User Manual)

# 2 Driver and Utility Installation

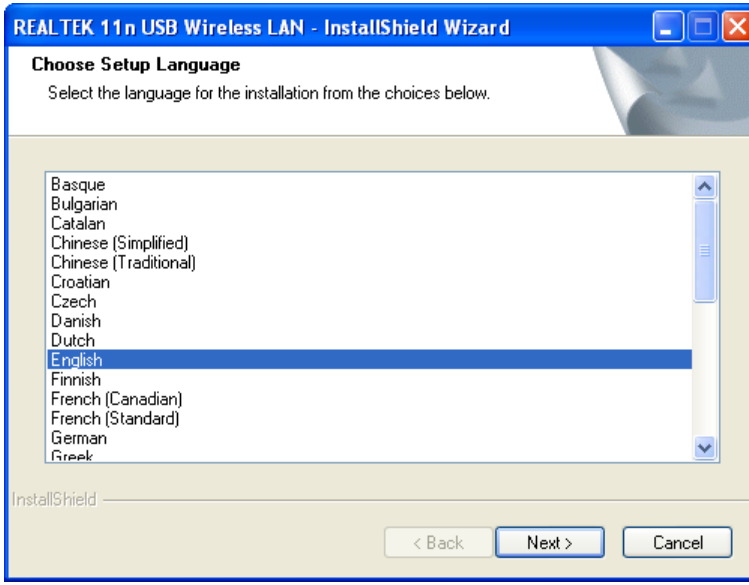
This chapter mainly describes how to install the Realtek 11b/g/n driver and utility. The installation procedures are illustrated on Windows XP.

## 2.1 Installing the Driver and Utility

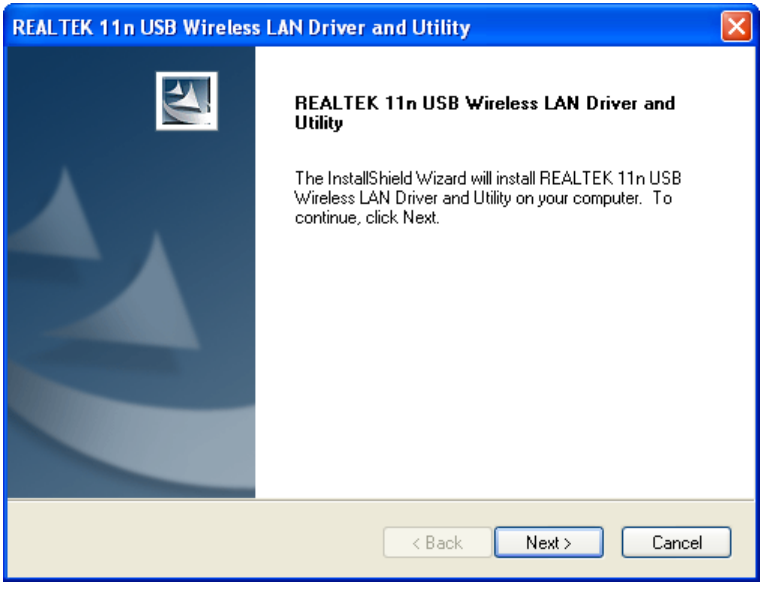
**Step1** Double-click the rar file (LOGO)RTL8188_8191_8192_SU_WindowsDriver_1086.5.1111.2009.F0062.P0525_UI_1.00.0142_VistaXP_V19.zip and then the following page appears.



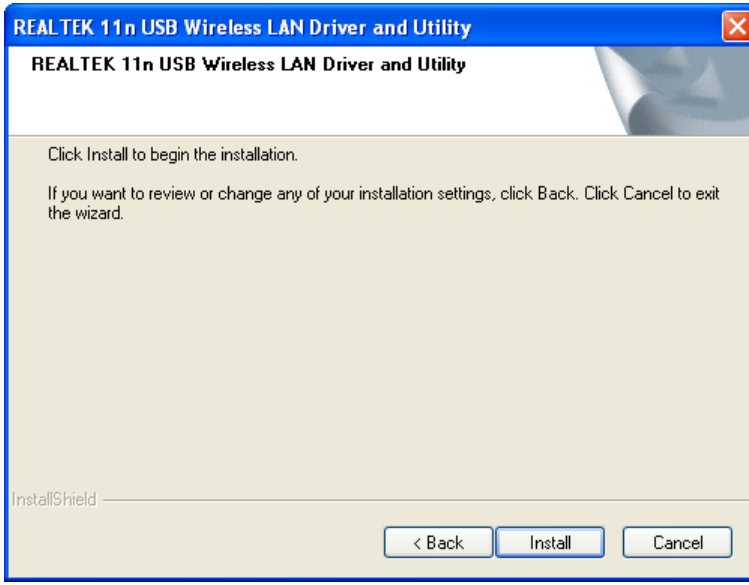

**Step2** Find the setup file named Setup.exe, and then double-click Setup.exe to start the installation. After a while, the **Choose Setup Language** page appears.



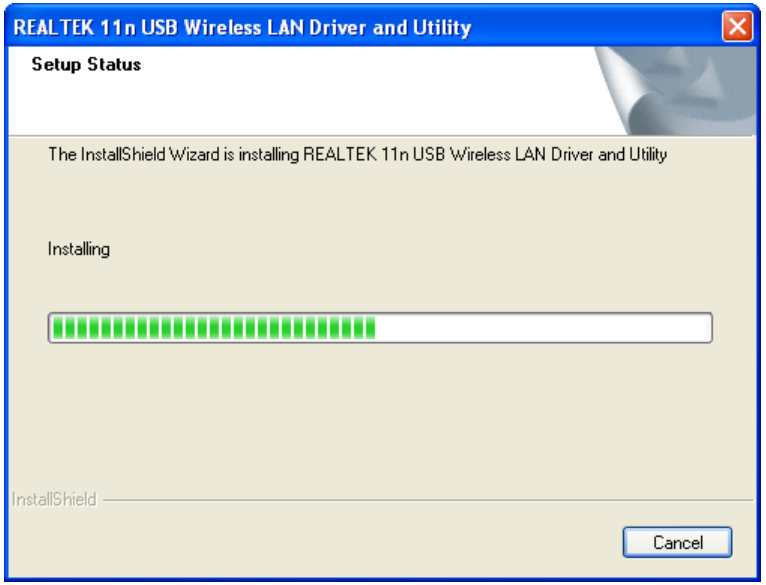

**Step3** Choose the appropriate language according to your needs, and then click **Next >**.


REALTEK 11n USB Wireless LAN Driver and Utility
REALTEK 11n USB Wireless LAN Driver and Utility
The InstallShield Wizard will install REALTEK 11n USB Wireless LAN Driver and Utility on your computer. To continue, click Next.
< Back
Next >
Cancel

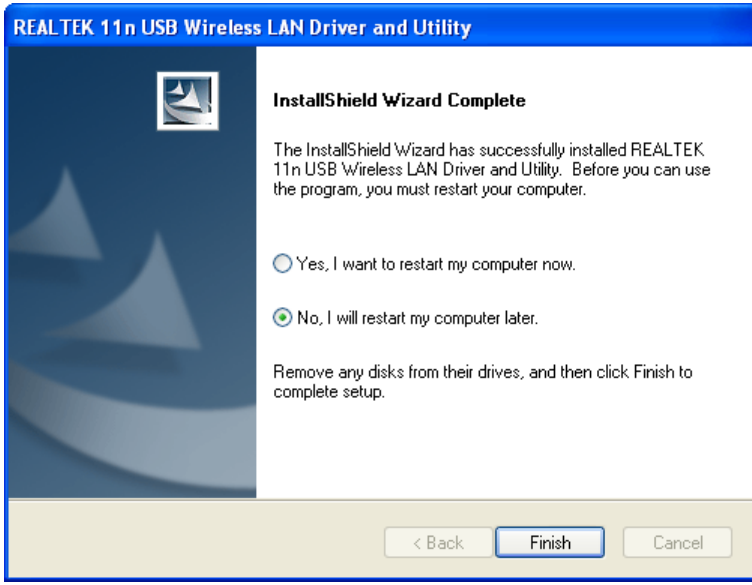
**Step4** Click **Next >** to continue.


REALTEK 11n USB Wireless LAN Driver and Utility
REALTEK 11n USB Wireless LAN Driver and Utility
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

**Step5** Click **Install** to begin the installation.


REALTEK 11n USB Wireless LAN Driver and Utility
Setup Status
The InstallShield Wizard is installing REALTEK 11n USB Wireless LAN Driver and Utility
Installing
InstallShield
Cancel

**Step6** After a while, the following page appears.


REALTEK 11n USB Wireless LAN Driver and Utility
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed REALTEK 11n USB Wireless LAN Driver and Utility. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

**Step7** Click **Finish** to complete the installation.

After installing the driver successfully, the shortcut icon of REALTEK 11n USB Wireless LAN Utility appears on the desktop. At the same time, the utility tray appears on the lower right corner of the window. After Inserting the GW-WN150 Realtek 11b/g/n USB adapter into the USB interface on your PC, the wireless connection icon appears on the lower right corner of the window and

the utility tray will change as .

**Note:**

The utility tray color might be different according to the wireless signal quality.

# 3 Uninstalling the Driver and Utility

Click **Start** > **All programs** > **REALTEK 11n USB Wireless LAN Utility** > **Uninstall** to begin the uninstallation on your PC. See the following figure:

# 4 Configuring the Utility

The Realtek 11b/g/n Wireless USB adapter can be configured by its utility for Windows 2000, Windows XP, Vista, and Windows 7.This section will take the configuration on Windows XP for example and guide you to configure your wireless adapter for wireless connectivity with trustable data security encryption features. The configuration steps in Windows 2000 & XP & Vista & Win7 are similar. For the configurations in Windows XP, please refer to the instructions in Windows XP.

**Note**:

If your OS is Windows XP, you can use Windows XP to configure the wireless network settings. (To use this function, you must upgrade the OS with sp2).

## 4.1 Checking the Utility Status

After the adapter's driver and utility have been installed, the adapter's tray will appear on the lower right corner of the window. It means the utility is running on your system. If the utility does not run, you can run the utility by clicking: **Start> All Programs> REALTEK 11n USB Wireless LAN Utility> REALTEK 11n USB Wireless LAN Utility**. If the tray still does not appear, the driver or utility may be installed incorrectly or the adapter is unplugged, please try again.

## 4.2 Signal Strength Indicated by the Utility Icon

: It indicates that the connection and the signal strength are good.

: It indicates that the connection and the signal strength are normal.

: It indicates that it has not connected yet.

: It indicates that no wireless NIC can be detected.

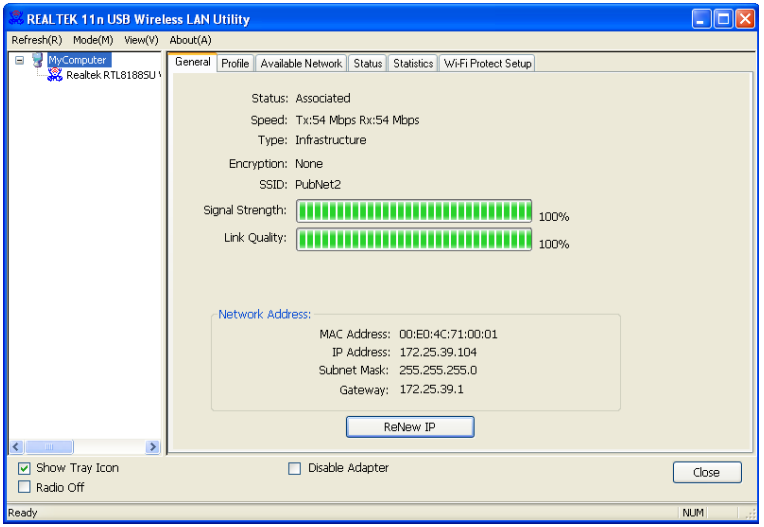
## 4.3 Opening the Utility

You can choose one of the following methods to open the utility:

- Double-click the shortcut icon on the desktop
- Click the utility icon

- Right-click the utility icon and select **Open Config Utility** in the menu.

## 4.4 General Page



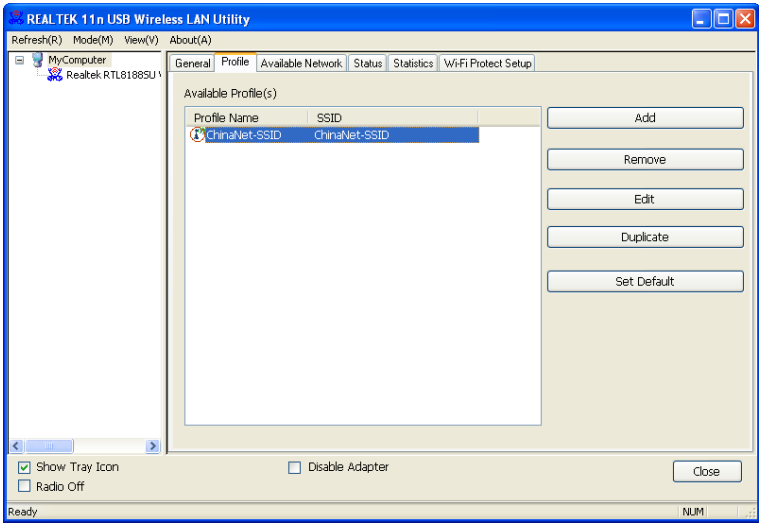

The **General** page shows the status of the wireless card such as speed, network type, Encryption type, SSID, signal strength, link quality and so on. If it connects to an AP, it shows the MAC Address, IP Address, subnet Mask, gateway information of the USB adapter.

On the left hand side of the page, it shows the adapter numbers installed on your computer.

At the bottom of the page, there are three options:

- Show tray Icon: Whether to show the utility icon on the lower right corner of window.
- Radio Off: Whether to enable the radio switch.
- Disable Adapter: Whether to enable the Realtek USB wireless adapter.

## 4.5 Profile Page



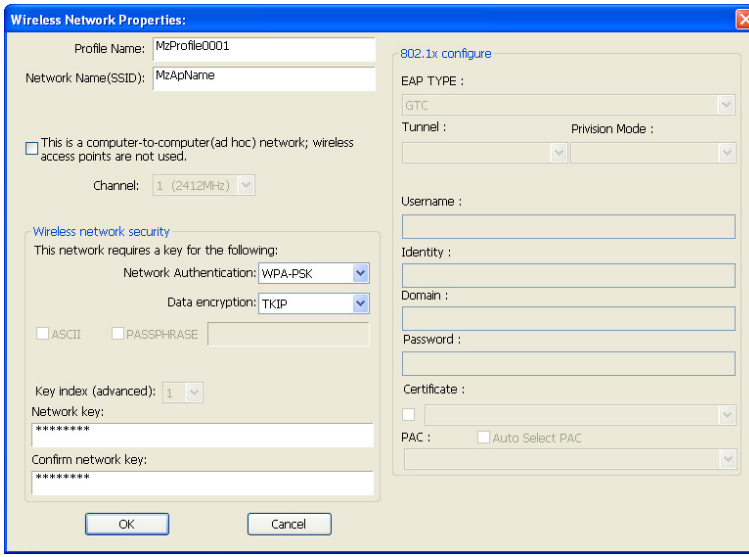

The **Profile** page provides the following functions:

- Adding a profile
- Removing a profile
- Editing a profile

- Duplicating a profile
- Setting a default profile

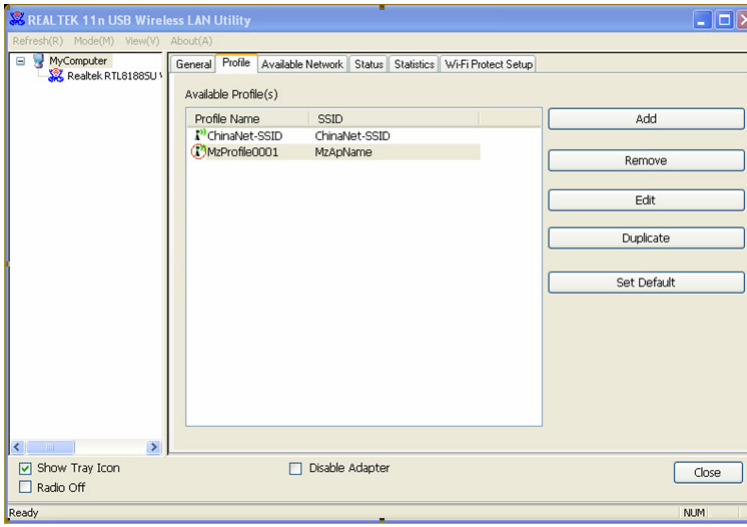
### 4.5.1 Adding a Profile

Click the **Add** button on the **Profile** page, and then the following page appears.




In this page, enter the profile name, SSID, network authentication type, data encryption type, and network key.

After clicking the **OK** button, the new added profile appears in the **Available Profile(s)** list of the **Profile** page. See the following page:




## 4.5.2 Removing a Profile

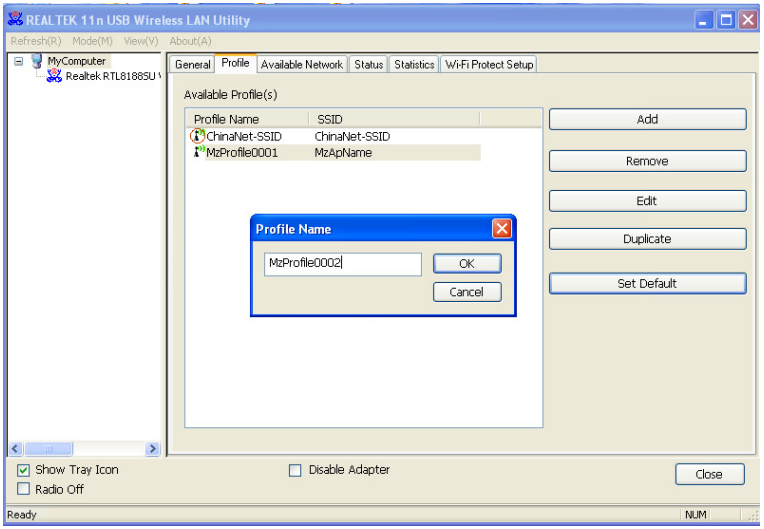
To delete a profile, highlight the desired profile name in the **Available Profile(s)** list, and then click the **Remove** button.

## 4.5.3 Editing a Profile

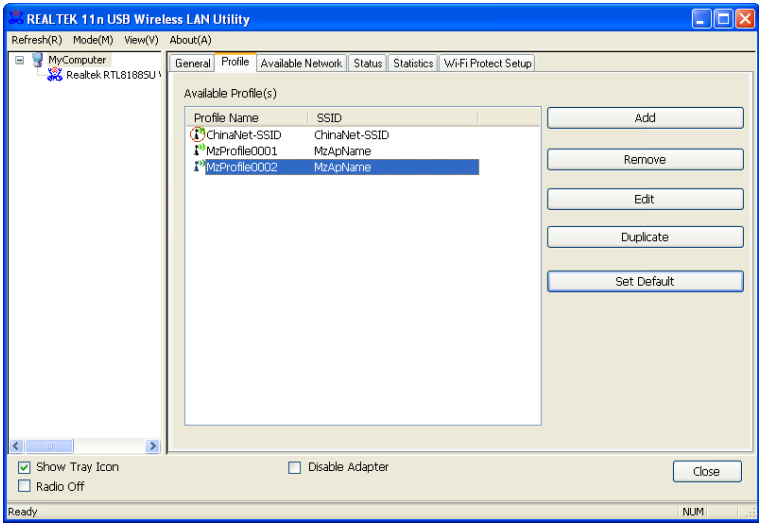
To edit a profile, highlight the desired profile name in the **Available Profile(s)** list, and then click the **Edit** button. You can modify the SSID, network authentication type, data encryption type, and network key of the selected profile.

## 4.5.4 Duplicating a Profile

To duplicate a profile, highlight the desired profile name in the **Available Profile(s)** list, and then click the **Duplicate** button. A **Profile Name** window pops up.



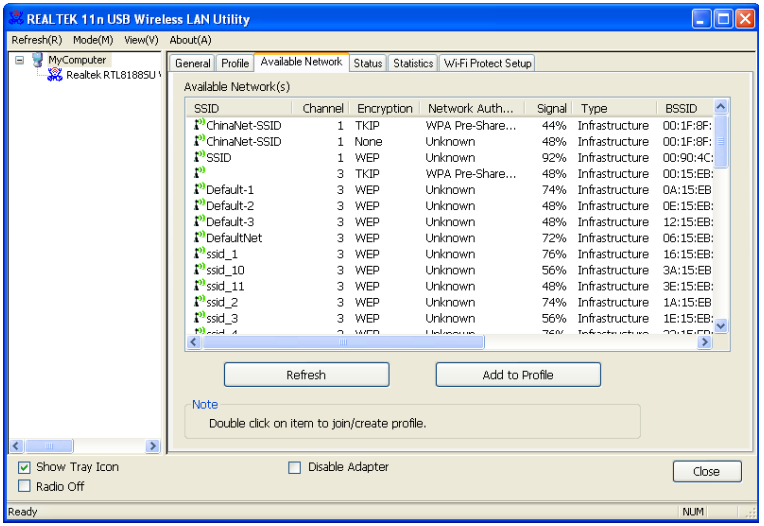

Enter the profile name that needs to be duplicated in the **Profile Name** Window. After clicking the **OK** button, the duplicated profile appears in the **Available Profile(s)** list.




### 4.5.5 Setting a Default Profile

To set a profile to be the default one, highlight the desired profile name in the **Available Profile(s)** list, and then click the **Set Default** button.

## 4.6 Available Network Page


REALTEK 11n USB Wireless LAN Utility
Refresh(R) Mode(M) View(V) About(A)
MyComputer
Realtek RTL8188SU
General Profile Available Network Status Statistics Wi-Fi Protect Setup
Available Network(s)
SSID Channel Encryption Network Auth... Signal Type BSSID
ChinaNet-SSID 1 TKIP WPA Pre-Share... 44% Infrastructure 00:1F:8F:
ChinaNet-SSID 1 None Unknown 48% Infrastructure 00:1F:8F:
SSID 1 WEP Unknown 92% Infrastructure 00:90:4C:
3 TKIP WPA Pre-Share... 48% Infrastructure 00:15:EB:
Default-1 3 WEP Unknown 74% Infrastructure 0A:15:EB
Default-2 3 WEP Unknown 48% Infrastructure 0E:15:EB:
Default-3 3 WEP Unknown 48% Infrastructure 12:15:EB:
DefaultNet 3 WEP Unknown 72% Infrastructure 06:15:EB:
ssid_1 3 WEP Unknown 76% Infrastructure 16:15:EB:
ssid_10 3 WEP Unknown 56% Infrastructure 3A:15:EB
ssid_11 3 WEP Unknown 48% Infrastructure 3E:15:EB:
ssid_2 3 WEP Unknown 74% Infrastructure 1A:15:EB
ssid_3 3 WEP Unknown 56% Infrastructure 1E:15:EB:
Refresh
Add to Profile
Note
Double click on item to join/create profile.
Show Tray Icon
Radio Off
Disable Adapter
Close
Ready
NUM

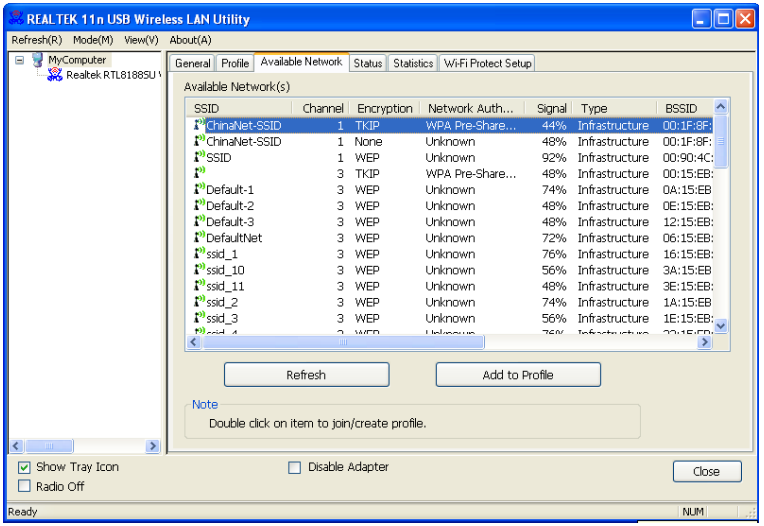
The **Available Network** page displays the information of current available networks, including SSID, channel, encryption type, authentication type, signal strength, BSSID, supported rates, and mode.

There are two buttons under the **Available Network(s)** list.

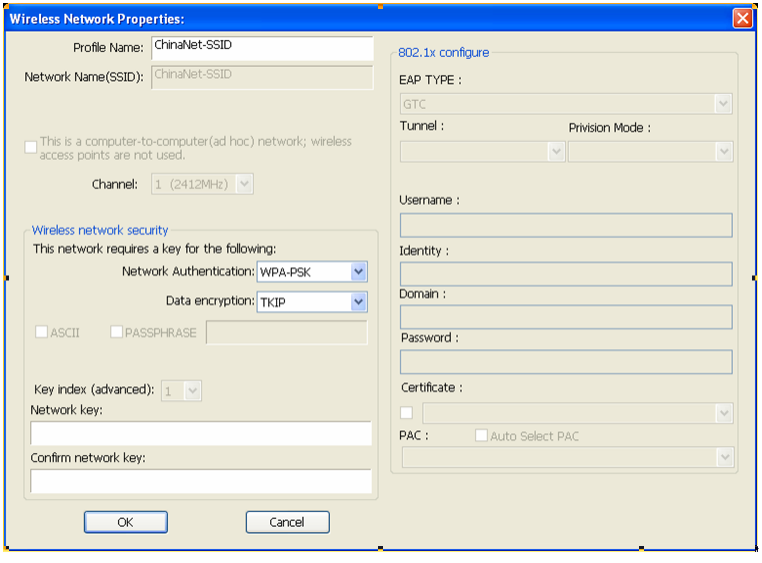
- **Refresh**: Click this button to refresh the **Available Network(s)** list.
- **Add to Profile**: Select an AP in the **Available Network(s)** list to create a profile.

To add an AP in the **Available Network(s)** list to create a profile, do as follows:

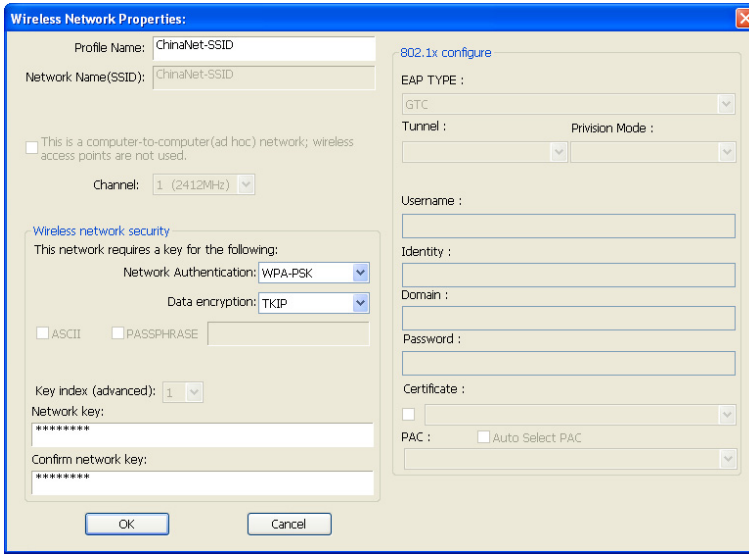
**Step1** Select an AP in the **Available Network(s)** list.


REALTEK 11n USB Wireless LAN Utility
Refresh(R) Mode(M) View(V) About(A)
MyComputer
Realtek RTL8188SU
General Profile Available Network Status Statistics Wi-Fi Protect Setup
Available Network(s)
SSID Channel Encryption Network Auth... Signal Type BSSID
ChinaNet-SSID 1 TKIP WPA Pre-Share... 44% Infrastructure 00:1F:8F:
ChinaNet-SSID 1 None Unknown 48% Infrastructure 00:1F:8F:
SSID 1 WEP Unknown 92% Infrastructure 00:90:4C:
3 TKIP WPA Pre-Share... 48% Infrastructure 00:15:EB:
Default-1 3 WEP Unknown 74% Infrastructure 0A:15:EB
Default-2 3 WEP Unknown 48% Infrastructure 0E:15:EB:
Default-3 3 WEP Unknown 48% Infrastructure 12:15:EB:
DefaultNet 3 WEP Unknown 72% Infrastructure 06:15:EB:
ssid_1 3 WEP Unknown 76% Infrastructure 16:15:EB:
ssid_10 3 WEP Unknown 56% Infrastructure 3A:15:EB
ssid_11 3 WEP Unknown 48% Infrastructure 3E:15:EB:
ssid_2 3 WEP Unknown 74% Infrastructure 1A:15:EB
ssid_3 3 WEP Unknown 56% Infrastructure 1E:15:EB:
Refresh
Add to Profile
Note
Double click on item to join/create profile.
Show Tray Icon
Radio Off
Disable Adapter
Close
Ready
NUM

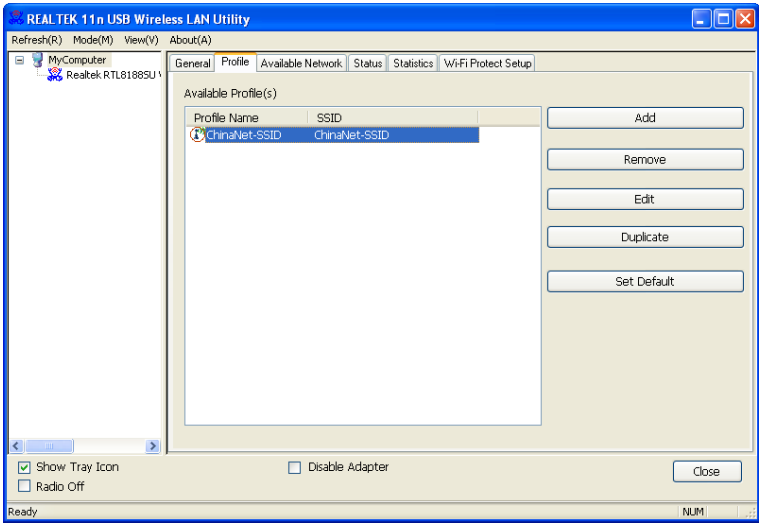
**Step2** Click the **Add to Profile** button.



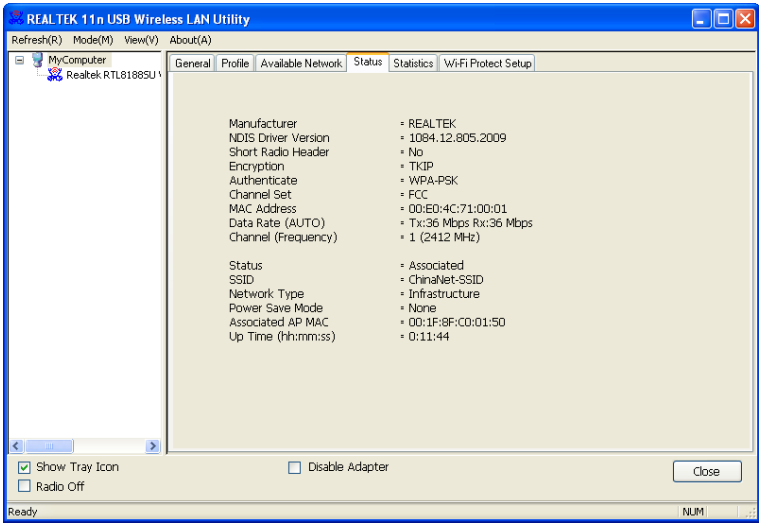

**Step3** Enter the profile name, network authentication type, data encryption type, and network key.




**Step4** After clicking the **OK** button, the new added profile appears in the **Available Profile(s)** list of the **Profile** page. See the following page:

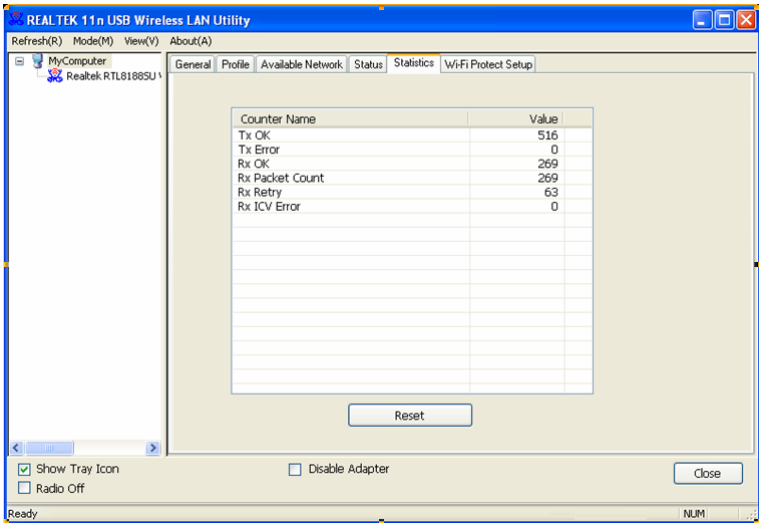



## 4.7 Status Page

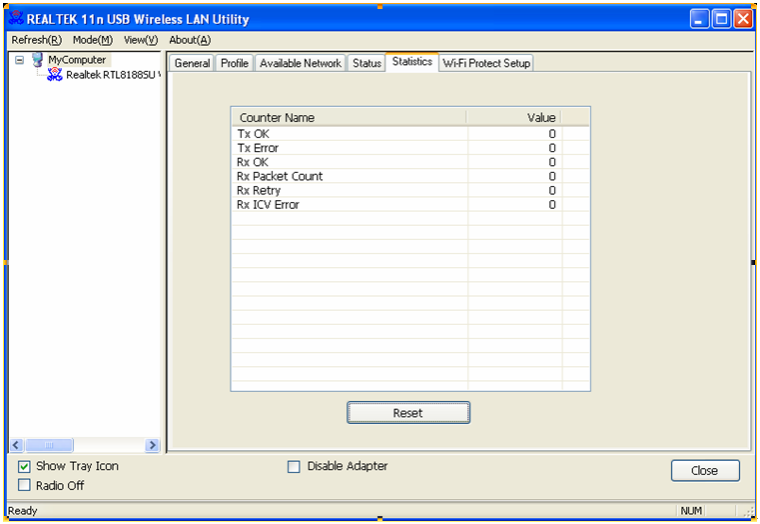



The **Status** page displays the information about current connection status, such as SSID, Network type, associated AP MAC.

## 4.8 Statistics Page




The **Statistics** page displays the statistical information of the receiving and transmitting frames. Click the **Reset** button to reset the count of the frames to zero. See the following figure:




## 4.9 Wi-Fi Protected Setup Page

This page allows you to set the WPS function for the Realtek 11b/g/n USB wireless adapter and a wireless AP (Access point).

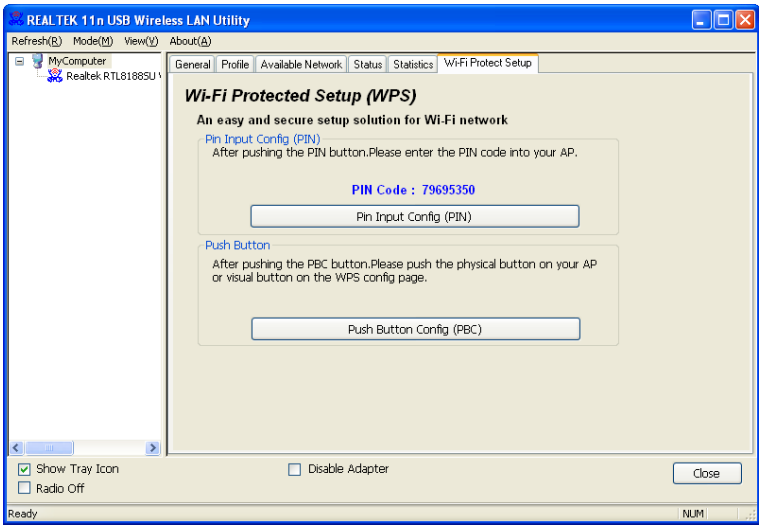
If a wireless AP supports Wi-Fi Protected Setup (WPS), you can establish a wireless connection between this card and the AP by using either PIN method or Push Button Configuration (PBC) method. It is recommended that you choose the simplest method that your AP supports.

**Note**:

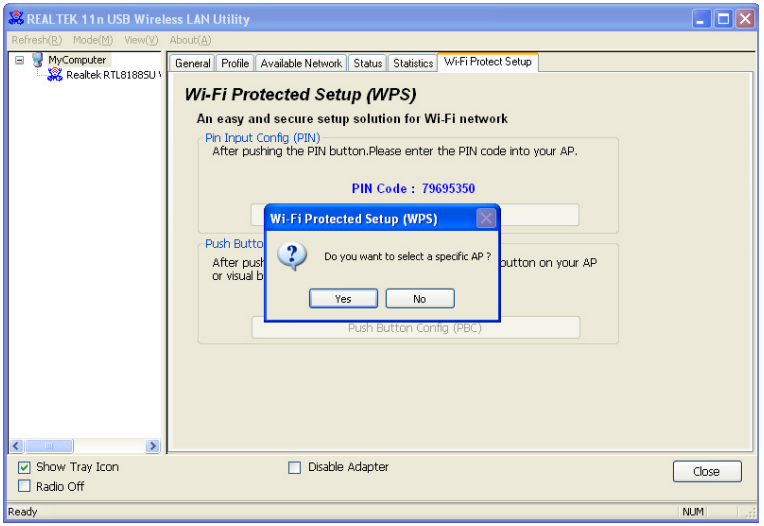
To create a successful connection by WPS, meanwhile, you should also configure the WPS parameters on AP.

### 4.9.1 PIN

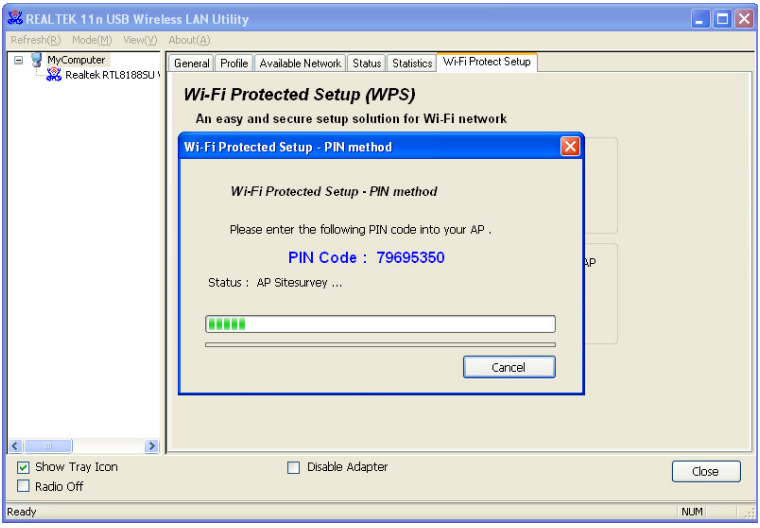
To configure PIN mode, do as follows:


REALTEK 11n USB Wireless LAN Utility
Refresh(R) Mode(M) View(V) About(A)
MyComputer
Realtek RTL8188SU
General Profile Available Network Status Statistics Wi-Fi Protect Setup
Wi-Fi Protected Setup (WPS)
An easy and secure setup solution for Wi-Fi network
Pin Input Config (PIN)
After pushing the PIN button.Please enter the PIN code into your AP.
PIN Code : 79695350
Pin Input Config (PIN)
Push Button
After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.
Push Button Config (PBC)
Show Tray Icon
Radio Off
Disable Adapter
Close
Ready
NUM

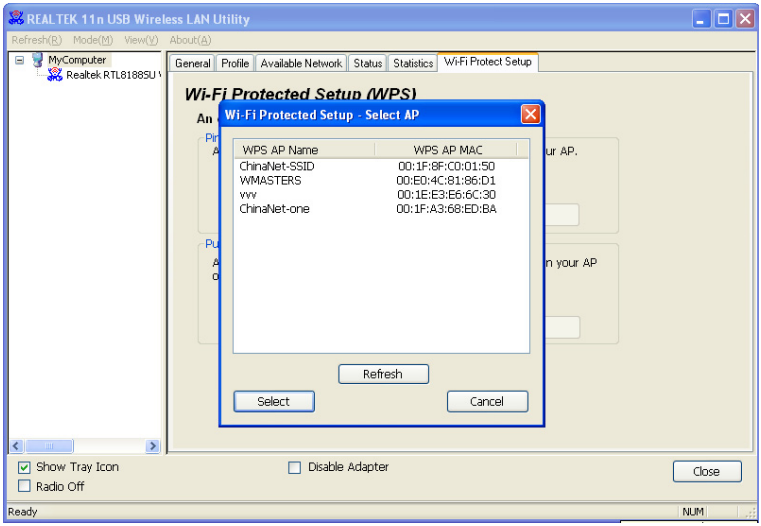
**Step1** Memorize the PIN code (e.g. 79695350). Click the **Pin Input Config (PIN)** button in the **Wi-Fi Protect Setup** page, and then a dialogue box of **Wi-Fi Protect Setup** (WPS) pops up.


REALTEK 11n USB Wireless LAN Utility
Refresh(R) Mode(M) View(V) About(A)
MyComputer
Realtek RTL8188SU
General Profile Available Network Status Statistics Wi-Fi Protect Setup
Wi-Fi Protected Setup (WPS)
An easy and secure setup solution for Wi-Fi network
Pin Input Config (PIN)
After pushing the PIN button.Please enter the PIN code into your AP.
PIN Code : 79695350
Wi-Fi Protected Setup (WPS)
Do you want to select a specific AP ?
Yes
No
Push Button Config (PBC)
Show Tray Icon
Radio Off
Disable Adapter
Close
Ready
NUM

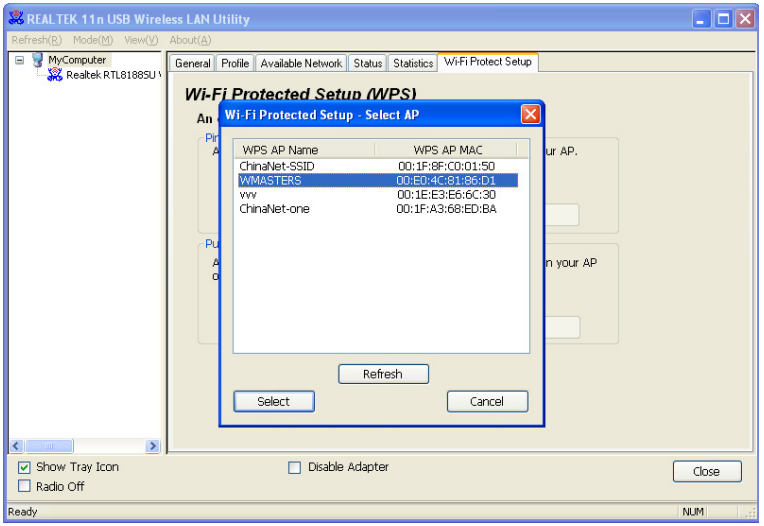
**Step2** (a)If you choose **No**, it means the utility automatically connects to an AP.



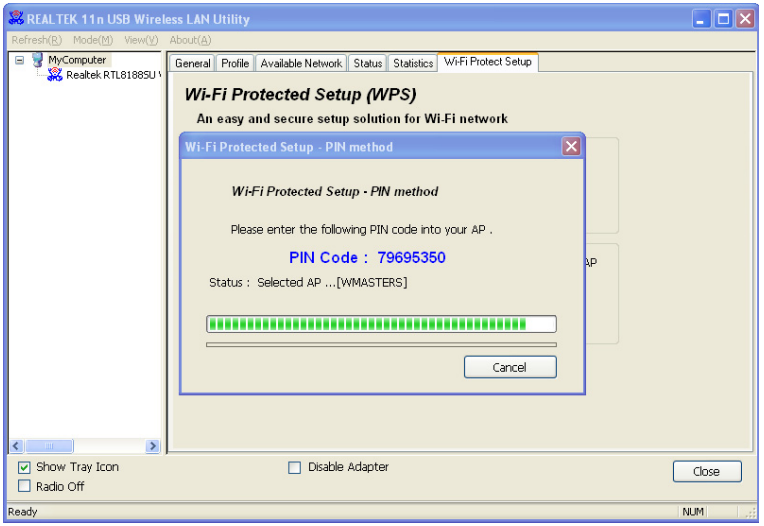

(b)If you choose **Yes** to select an AP, the following page appears.




Select an AP in the list, and then click the **Select** button.




After clicking the **Select** button, the wireless network card begins WPS connection.

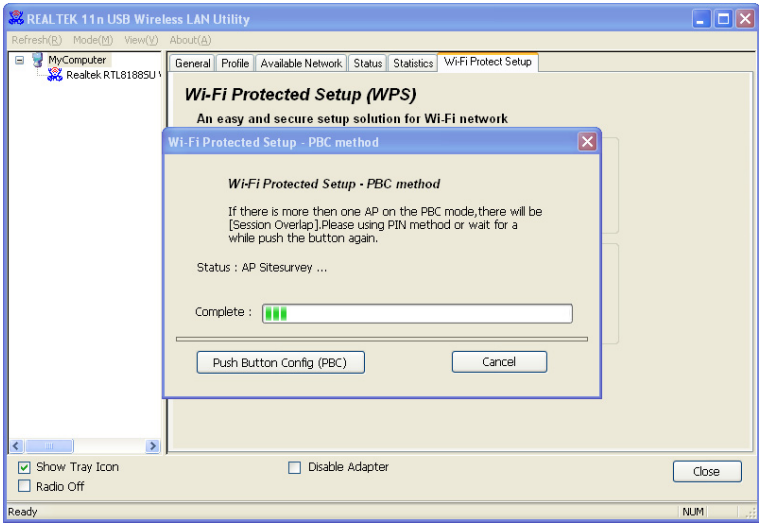

REALTEK 11n USB Wireless LAN Utility
Refresh(R) Mode(M) View(V) About(A)
MyComputer
Realtek RTL8188SU
General Profile Available Network Status Statistics Wi-Fi Protect Setup
Wi-Fi Protected Setup (WPS)
An easy and secure setup solution for Wi-Fi network
Wi-Fi Protected Setup - PIN method
Wi-Fi Protected Setup - PIN method
Please enter the following PIN code into your AP .
PIN Code : 79695350
Status : Selected AP ...[WMASTERS]
Cancel
Show Tray Icon
Radio Off
Disable Adapter
Close
Ready
NUM

**Step3** Within two minutes, enter the Pin code on AP, and then the Realtek USB wireless card connects to AP.

### 4.9.2 PBC

To configure PBC mode, do as follows:

**Step1** Click the **Push Button Config (PBC)** in the **Wi-Fi Protect Setup** page, and then the wireless network card begins WPS connection.




**Step2** Within two minutes, Press the PBC button on AP, and then the Realtek USB wireless card can connects to AP.

# Appendix A: Glossary

**802.11b -** The 802.11b standard specifies a wireless networking at 11 Mbps using direct-sequence spread-spectrum (DSSS) technology and operating in the unlicensed radio spectrum at 2.4GHz, and WEP encryption for security. 802.11b networks are also referred to as Wi-Fi networks.

**802.11g -** Specification for wireless networking at 54 Mbps using direct-sequence spread-spectrum (DSSS) technology, using OFDM modulation and operating in the unlicensed radio spectrum at 2.4GHz, and backward compatibility with IEEE 802.11b devices, and WEP encryption for security.

**Ad-hoc Network -** An ad-hoc network is a group of computers, each with a wireless adapter, connected as an independent 802.11 wireless LAN. Ad-hoc wireless computers operate on a peer-to-peer basis, communicating directly with each other without the use of an access point. Ad-hoc mode is also referred to as an Independent Basic Service Set (IBSS) or as peer-to-peer mode, and is useful at a departmental scale or SOHO operation.

**DSSS** (**D**irect-**S**equence **S**pread **S**pectrum) **-** DSSS generates a redundant bit pattern for all data transmitted. This bit pattern is called a chip (or chipping code). Even if one or more bits in the chip are damaged during transmission, statistical techniques embedded in the receiver can recover the original data without the need for retransmission. To an unintended receiver, DSSS appears as low power wideband noise and is rejected (ignored) by most narrowband receivers. However, to

an intended receiver (i.e. another wireless LAN endpoint), the DSSS signal is recognized as the only valid signal, and interference is inherently rejected (ignored).

**FHSS** (**F**requency **H**opping **S**pread **S**pectrum) **-** FHSS continuously changes (hops) the carrier frequency of a conventional carrier several times per second according to a pseudo-random set of channels. Because a fixed frequency is not used, and only the transmitter and receiver know the hop patterns, interception of FHSS is extremely difficult.

**Infrastructure Network -** An infrastructure network is a group of computers or other devices, each with a wireless adapter, connected as an 802.11 wireless LAN. In infrastructure mode, the wireless devices communicate with each other and to a wired network by first going through an access point. An infrastructure wireless network connected to a wired network is referred to as a Basic Service Set (BSS). A set of two or more BSS in a single network is referred to as an Extended Service Set (ESS). Infrastructure mode is useful at a corporation scale, or when it is necessary to connect the wired and wireless networks.

**Spread Spectrum -** Spread Spectrum technology is a wideband radio frequency technique.

# Appendix B: Country Channel List

The following table displays the country name, channel classification, and range.

| Country Name | Classification | Range |
|---|---|---|
| Argentina | 0 | CH1~11 |
| Australia | 1 | CH1~13 |
| Austria | 1 | CH1~13 |
| Bahrain | 1 | CH1~13 |
| Belarus | 1 | CH1~13 |
| Belgium | 1 | CH1~13 |
| Bolivia | 1 | CH1~13 |
| Brazil | 0 | CH1~11 |
| Bulgaria | 1 | CH1~13 |
| Canada | 0 | CH1~11 |
| Chile | 1 | CH1~13 |
| China | 1 | CH1~13 |
| Colombia | 0 | CH1~11 |
| Costa Rica | 1 | CH1~13 |
| Croatia | 1 | CH1~13 |
| Cyprus | 1 | CH1~13 |
| Czech Republic | 1 | CH1~13 |

| | | |
|---|---|---|
| Denmark | 1 | CH1~13 |
| Ecuador | 1 | CH1~13 |
| Egypt | 1 | CH1~13 |
| Estonia | 1 | CH1~13 |
| Finland | 1 | CH1~13 |
| France | 3 | CH10~13 |
| France2 | 1 | CH1~13 |
| Germany | 1 | CH1~13 |
| Greece | 1 | CH1~13 |
| Hong Kong | 1 | CH1~13 |
| Hungary | 1 | CH1~13 |
| Iceland | 1 | CH1~13 |
| India | 1 | CH1~13 |
| Indonesia | 1 | CH1~13 |
| Ireland | 1 | CH1~13 |
| Israel | 6 | CH3~9 |
| Italy | 1 | CH1~13 |
| Japan | 5 | CH1~14 |
| Japan2 | 4 | CH14~14 |
| Japan3 | 1 | CH1~13 |
| Jordan | 3 | CH10~13 |

| | | |
|---|---|---|
| Kuwait | 1 | CH1~13 |
| Latvia | 1 | CH1~13 |
| Lebanon | 1 | CH1~13 |
| Latvia | 1 | CH1~13 |
| Lebanon | 1 | CH1~13 |
| Liechtenstein | 1 | CH1~13 |
| Lithuania | 1 | CH1~13 |
| Luxembourg | 1 | CH1~13 |
| Macedonia | 1 | CH1~13 |
| Malaysia | 1 | CH1~13 |
| Mexico | 0 | CH1~11 |
| Morocco | 1 | CH1~13 |
| Netherlands | 1 | CH1~13 |
| New Zealand | 1 | CH1~13 |
| Nigeria | 1 | CH1~13 |
| Norway | 1 | CH1~13 |
| Panama | 1 | CH1~13 |
| Paraguay | 1 | CH1~13 |
| Peru | 1 | CH1~13 |
| Philippines | 1 | CH1~13 |
| Poland | 1 | CH1~13 |

| | | |
|---|---|---|
| Portugal | 1 | CH1~13 |
| Puerto Rico | 1 | CH1~13 |
| Romania | 1 | CH1~13 |
| Russia | 1 | CH1~13 |
| Saudi Arabia | 1 | CH1~13 |
| Singapore | 1 | CH1~13 |
| Slovakia | 1 | CH1~13 |
| Slovenia | 1 | CH1~13 |
| South Africa | 1 | CH1~13 |
| South Korea | 1 | CH1~13 |
| Spain | 2 | CH10~11 |
| Sweden | 1 | CH1~13 |
| Switzerland | 1 | CH1~13 |
| Taiwan | 0 | CH1~11 |
| Thailand | 1 | CH1~13 |
| Turkey | 1 | CH1~13 |
| United Arab Emirates | 1 | CH1~13 |
| United Kingdom | 1 | CH1~13 |
| United States of America | 0 | CH1~11 |
| Uruguay | 1 | CH1~13 |
| Venezuela | 1 | CH1~13 |

| | | |
|---|---|---|
| Yugoslavia | 0 | CH1~11 |